



UNITED STATES DEPARTMENT OF COMMERCE  
Patent and Trademark Office  
Assistant Commissioner of Patents and Trademarks  
Washington, D.C. 20514

App. No. \_\_\_\_\_ Date of Filing \_\_\_\_\_ Date of Publication \_\_\_\_\_  
Inventor(s) \_\_\_\_\_ Applicant \_\_\_\_\_  
Attorney \_\_\_\_\_

Examiner \_\_\_\_\_

Art. Unit \_\_\_\_\_ Paper Number \_\_\_\_\_

DATE MAILED: \_\_\_\_\_

This is a communication from the examiner in charge of your application  
COMMISSIONER OF PATENTS AND TRADEMARKS

OFFICE ACTION SUMMARY

☒ Responsive to communication(s) filed on 7/6/98

☐ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 D.C. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 (three) month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

- ☒ Claim(s) 1-17 is/are pending in the application.  
Of the above, claim(s) 4-10 is/are withdrawn from consideration.  
☐ Claim(s) \_\_\_\_\_ is/are allowed.  
☒ Claim(s) 1-3 and 11-17 is/are rejected.  
☐ Claim(s) \_\_\_\_\_ is/are objected to.  
☒ Claim(s) 1-17 are subject to restriction or election requirement.

Application Papers

- ☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.  
☐ The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.  
☐ The proposed drawing correction filed on \_\_\_\_\_ is ☐ approved ☐ disapproved.  
☐ The specification is objected to by the Examiner.  
☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).  
☐ All ☐ Some\* ☐ None of the CERTIFIED copies of the priority documents have been  
☐ received.  
☐ received in Application No. (Series Code/Serial Number) \_\_\_\_\_  
☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\*Certified copies not received: \_\_\_\_\_

- ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e)

Attachment(s)

- ☒ Notice of Reference Cited, PTO-892  
☐ Information Disclosure Statement(s), PTO 1449, Paper No(s) \_\_\_\_\_  
☐ Interview Summary, PTO-413  
☐ Notice of Draftsperson's Patent Drawing Review, PTO-948  
☐ Notice of Informal Patent Application, PTO 152

--SEE OFFICE ACTION ON THE FOLLOWING PAGES--

Art Unit: 1652

### **DETAILED ACTION**

1. The Group and/or Art unit location of your application in the PTO has changed. To aid in correlating any papers for this application, all further correspondence regarding this application should be directed to Group Art Unit 1652.

### ***Response to Amendment***

2. Applicants' amendment, filed July 6, 1998, has been entered and fully considered. Claims 1-17 remain pending with claims 4-10 withdrawn from consideration as being directed to non-elected species.

### ***Objections/Rejections Withdrawn***

3. Upon review and in light of Applicants' arguments, the previous rejection of claims 1 and 11-17 under 35 U.S.C. 112, first paragraph, concerning enablement for any viral protein "required for viral infection, replication, assembly or release" is withdrawn.

4. In light of claim amendments, the previous rejection of claims 1-3 and 11-17 under 35 U.S.C. 112, first paragraph, concerning enablement for any protein or peptide "corresponding to the binding site" of such proteins is withdrawn.

Art Unit: 1652

5. Upon review and in light of Applicants' arguments, the previous rejection of claims 1-3 and 11-17 under 35 U.S.C. 112, first paragraph, concerning enablement for assays conducted "under conditions and for a time sufficient to permit binding and the formation of a complex" is withdrawn.

6. In light of claim amendments, the previous rejection of claims 1-3 and 11-17 under 35 U.S.C. § 112, second paragraph, concerning the words "corresponding to" is withdrawn.

***Claim Rejections - 35 U.S.C. § 112***

7. Claims 1-3 and 11-17 are again rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. This rejection has been explained in the previous Office Action with regard to "small organic molecule". Applicant's arguments have been fully considered but they are not deemed to be persuasive. Applicant argues that the ordinary artisan would readily understand the term to refer to those organic molecules smaller than macromolecules, which are defined in the art.

Applicants' assertion appears to define the universe of organic molecules into those that are "macromolecules" and those that are "small" and then proceeds to assert that since the former term is understood in the art, the latter term is definite. This is unpersuasive because the universe of organic molecules is not so defined. As an initial matter, Applicants have failed to provide any

Art Unit: 1652

support for their position that one skilled in the art has the same view of the universe of organic molecules as being divided into "macromolecules" of colloidal size such as proteins, polynucleotides and polysaccharides. Even with this definition, it is unclear as to whether large peptides or oligonucleotides or oligosaccharides which may or may not be proteins, polynucleotides and polysaccharides, respectively, would be considered "macromolecules" or "small organic molecules" because there is no clear line denoting the transition from one term to another. Moreover, the fact that claims 1 and 2 recite "peptide or small organic molecule" suggests that contrary to the apparent assertion, peptides are not included within the definition of "small organic molecule".

Furthermore, the Examiner notes that Applicants have failed to address the issue of any possible "large organic molecules" or "medium sized organic molecules" and fit them into the alleged view of the organic molecule universe. Perhaps it is assumed that these possibilities would also be considered "small organic molecules", but no support is provided to address this possibility or assert this position. As such, Applicants have failed to demonstrate that the claims are definite.

The Examiner notes that alteration of the language to delete "small" would obviate this rejection and not raise new issues under 35 U.S.C. 112.

Art Unit: 1652

*Claim Rejections - 35 U.S.C. § 102*

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

Claim 1 is again rejected under 35 U.S.C. 102(b) as being anticipated by Barik et al.(AD).

This rejection has been explained in the previous Office Action. Applicant's arguments have been fully considered but they are not deemed to be persuasive. Applicant argues that the claim specifies the detection of complex formation between two proteins while Barik et al. does not describe or suggest detecting complex formation.

Contrary to Applicants' assertion, the Examiner notes that Barik et al.(AD) do teach the detection of the phosphorylation of vesicular stomatis virus (VSV) phosphoprotein P by the host cell protein casein kinase II, which is detection of complex formation because phosphorylation cannot occur without complex formation. Since the scope of claim 1 encompasses the detection of complexes by detection of the result(s) of such complexes, Barik et al.(AD) anticipate the claim.

Art Unit: 1652

9. Claims 1 and 11-17 (to the extent claims 11-17 are dependent from claim 1) are rejected under 35 U.S.C. 102(e) as being anticipated by Miles et al. ('985). This rejection has not been previously made.

Miles et al. teach screening assays to identify antiviral agents that inhibit the interference of p68 kinase by viral non-nucleic acid macromolecules (see column 5, line 33 to column 6, line 6). They further teach the detection of complex formation between the viral macromolecule and a host protein kinase as well as the immobilization of the kinase on a solid support (see column 6, lines 37-56). They also teach the use of a labeled partner in the complex formation assays as well as the use of antibodies to attach a partner to the solid phase, the use of antibodies to capture a partner from solution, and the separation of the product complex from solution (see column 19, line 37 to column 24, line 20). Thus Miles et al. anticipate the claims

### *Conclusion*

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Draetta et al. teach the use of a host cell ubiquitin conjugating enzyme to screen for agents that disrupt the binding of the enzyme to viral proteins (see column 35, line 42 to column 36, line 16).


11. Any inquiry concerning this communication or earlier communications should be directed to Kawai Lau whose telephone number is 703-308-4209. The examiner can normally be reached Monday-Friday from 7 am to 4:30 pm.

Art Unit: 1652

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert A. Wax, can be reached at 703-308-4216. The fax phone number for Official Papers to Technology Center 1600 is (703) 305-3014 or (703) 308-4242. The fax phone number for Unofficial Papers to the Examiner is (703) 308-0294.

Any inquiry of a general nature or relating to the status of this application should be directed to the Technology Center receptionist whose telephone number is 703-308-0196.

Kawai Lau, Ph.D.  
Group 1650  
October 12, 1998

  
**Kawai Lau**  
**Patent Examiner**  
**Technology Center 1600**